

Dermatopontin (F-4): sc-376863

BACKGROUND

Dermatopontin, also known as TRAMP or DPT, is a 201 amino acid secreted protein belonging to the Dermatopontin family. Expressed in fibroblasts, heart, skeletal muscle, brain and pancreas, Dermatopontin may participate in cell-matrix interactions and matrix assembly by possibly serving as a communication link between the cell surface of dermal fibroblasts and their extracellular matrix environment. Dermatopontin may also play a critical role in the elasticity of skin and collagen accumulation attributed to collagen fibrillogenesis. Implicated in accelerating collagen fibril formation, Dermatopontin stabilizes collagen fibrils against low-temperature dissociation. Induced by TGF β 1 and inhibited by IL-4, Dermatopontin may be involved in the pathogenesis and growth of prostate cancer. Dermatopontin enhances the activity of TGF β 1 and inhibits cell proliferation.

REFERENCE

1. Kuroda, K., et al. 1999. Dermatopontin expression is decreased in hypertrophic scar and systemic sclerosis skin fibroblasts and is regulated by transforming growth factor- β 1, interleukin-4, and matrix collagen. *J. Invest. Dermatol.* 112: 706-710.
2. Takeda, U., et al. 2002. Targeted disruption of Dermatopontin causes abnormal collagen fibrillogenesis. *J. Invest. Dermatol.* 119: 678-683.

CHROMOSOMAL LOCATION

Genetic locus: DPT (human) mapping to 1q24.2; Dpt (mouse) mapping to 1 H2.2.

SOURCE

Dermatopontin (F-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 25-57 near the N-terminus of Dermatopontin of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Dermatopontin (F-4) is available conjugated to agarose (sc-376863 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376863 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376863 PE), fluorescein (sc-376863 FITC), Alexa Fluor[®] 488 (sc-376863 AF488), Alexa Fluor[®] 546 (sc-376863 AF546), Alexa Fluor[®] 594 (sc-376863 AF594) or Alexa Fluor[®] 647 (sc-376863 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376863 AF680) or Alexa Fluor[®] 790 (sc-376863 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376863 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

Store at 4[°] C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Dermatopontin (F-4) is recommended for detection of Dermatopontin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

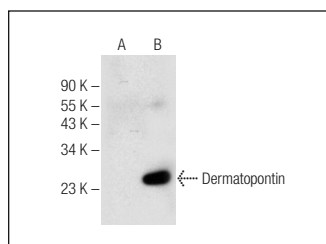
Dermatopontin (F-4) is also recommended for detection of Dermatopontin in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Dermatopontin siRNA (h): sc-88148, Dermatopontin siRNA (m): sc-143012, Dermatopontin shRNA Plasmid (h): sc-88148-SH, Dermatopontin shRNA Plasmid (m): sc-143012-SH, Dermatopontin shRNA (h) Lentiviral Particles: sc-88148-V and Dermatopontin shRNA (m) Lentiviral Particles: sc-143012-V.

Molecular Weight of Dermatopontin: 22 kDa.

Positive Controls: Dermatopontin (h): 293T Lysate: sc-115088.

DATA



Dermatopontin (F-4): sc-376863. Western blot analysis of Dermatopontin expression in non-transfected: sc-117752 (A) and human Dermatopontin transfected: sc-115088 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Krishnaswamy, V.R. and Korrapati, P.S. 2014. Role of Dermatopontin in re-epithelialization: implications on keratinocyte migration and proliferation. *Sci. Rep.* 4: 7385.
2. Yang, Q., et al. 2014. Dermatopontin is a novel regulator of the CdCl₂-induced decrease in claudin-11 expression. *Toxicol. In Vitro* 28: 1158-1164.
3. Cai, J., et al. 2016. Increased expression of Dermatopontin and its implications for testicular dysfunction in mice. *Mol. Med. Rep.* 13: 2431-2438.
4. Patel, A., et al. 2016. Mifepristone inhibits extracellular matrix formation in uterine leiomyoma. *Fertil. Steril.* 105: 1102-1110.
5. Rippe, C., et al. 2017. Hypertension reduces soluble guanylyl cyclase expression in the mouse aorta via the Notch signaling pathway. *Sci. Rep.* 7: 1334.
6. Seetaraman Amritha, T.M., et al. 2020. Cloning, expression and purification of recombinant Dermatopontin in *Escherichia coli*. *PLoS ONE* 15: e0242798.

RESEARCH USE

For research use only, not for use in diagnostic procedures.